

IN THE CLAIMS

Please amend the claims according to the following listing, in which insertions are indicated by underline and deletions are indicated by strikethrough or double brackets. This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A balancer driven gear of an engine comprising:

a bush member having a boss portion adapted to be fixed to a balancer shaft and a plurality of unevenly spaced outward dowels projecting radially outwardly from an outer periphery of the boss portion;

a gear member disposed coaxially with said bush member, said gear member having an annular portion with gear teeth formed on an outer periphery thereof and a plurality of inward dowels projecting radially inwardly from an inner periphery of the annular portion;

said bush member and said gear member being assembled in such a manner that said outward and inward dowels are disposed alternately in a peripheral direction of the balancer driven gear; and

elastic members respectively provided between [[the]] selected outward dowels on the bush member and [[the]] selected inward dowels on the gear member;

wherein at least one of the shapes and dimensions of said outward and inward dowels are asymmetric with respect to an axis of the balancer driven gear.

2. (Original) The balancer driven gear of an engine according to claim 1 wherein:

one of said outward dowels and the inward dowels have recesses between adjoining dowels;

the other dowels are located in said recesses, respectively;

two of said recesses positioned on opposite sides with respect to the axis of the balancer driven gear have mutually different depths; and

the other dowels, disposed within said two opposite recesses of the mutually different depths, have mutually different heights.

3. (Original) The balancer driven gear of an engine according to claim 2 wherein:

said one dowels are radially outwardly projecting dowels and said other dowels are radially inwardly projecting dowels.

4. (Currently Amended) [[The]] A balancer driven gear of an engine ~~according to claim 1 wherein, said balancer driven gear comprising:~~

a bush member having a boss portion fixed to a balancer shaft and a plurality of outward dowels projecting radially outwardly from an outer periphery of the boss portion;

a gear member disposed coaxially with said bush member, said gear member having an annular portion with gear teeth formed on an outer periphery thereof and a plurality of inward dowels projecting radially inwardly from an inner periphery of the annular portion;

said bush member and said gear member being assembled in such a manner that said outward and inward dowels are disposed alternately in a peripheral direction of the balancer driven gear; and

elastic members provided between selected outward dowels on the bush member and selected inward dowels on the gear member;

wherein at least one of the shapes and dimensions of said outward and inward dowels are asymmetric with respect to an axis of the balancer driven gear;

wherein one of said outward dowels and [[the]] said inward dowels have recesses formed between adjoining dowels;

wherein the other dowels are located in said recesses, respectively;

wherein two of said recesses positioned on opposite sides with respect to the axis of the balancer driven gear have mutually different peripheral widths; and

wherein the other dowels, disposed within said two opposite recesses of the different depths, have mutually different peripheral widths.

5. (Original) The balancer driven gear of an engine according to claim 4 wherein:
said one dowels are radially outwardly projecting dowels and said other dowels are radially inwardly projecting dowels.

6. (New) The balancer driven gear of an engine according to claim 1, wherein some of said elastic members are interconnected by a web portion.

7. (New) The balancer driven gear of an engine according to claim 1, wherein the annular portion of the gear member has two openings formed therein, and wherein the balancer driven gear further comprises a pair of spring dampers which respectively fit into the openings.

8. (New) The balancer driven gear of an engine according to claim 7, wherein selected dowels of the bush member have spring-receiving recesses formed therebetween, and wherein the bush member and the gear member are respectively configured so that they can only be nestingly fitted together one way when the openings of the gear member are aligned with the spring-receiving recesses of the bush member.

9. (New) The balancer driven gear of an engine according to claim 1, wherein some of the inward and dowels are disposed proximate one another without any elastic members therebetween.

10. (New) A balancer driven gear for an engine, said balancer gear comprising:
a bush member comprising:

a boss portion adapted to be affixed to a balancer shaft; and

a plurality of outward dowels projecting radially outwardly from an outer periphery of the boss portion, with respective recesses being formed between adjacent outward dowels;

a gear member disposed coaxially with said bush member, said gear member comprising:

an annular portion with gear teeth formed on an outer periphery thereof; and

a plurality of inward dowels projecting radially inwardly from an inner periphery of the annular portion, said inward dowels being spaced around the gear member so that they are aligned with selected recesses of the bush member;

said bush member and said gear member being nestingly intermeshed and assembled in such a manner that said outward and inward dowels are alternately disposed in a peripheral direction of the balancer driven gear; and

a plurality of elastic members selectively provided between selected outward dowels on the bush member and selected inward dowels on the gear member;

wherein two of said recesses positioned on opposite sides with respect to the axis of the balancer driven gear have mutually different depths; and

wherein two of the inward dowels, respectively disposed within said two opposite recesses, have mutually different heights.

11. (New) The balancer driven gear of an engine according to claim 10, wherein some of said elastic members are interconnected by a web portion.

12. (New) The balancer driven gear of an engine according to claim 10, wherein the flange portion of the gear member has two openings formed therein, and wherein the balancer driven gear further comprises a pair of spring dampers which respectively fit into the openings.

13. (New) The balancer driven gear of an engine according to claim 12, wherein selected dowels of the bush member have spring-receiving recesses formed therebetween, and wherein the bush member and the gear member are respectively configured so that they can only be nestingly fitted together one way when the openings of the gear member are aligned with the spring-receiving recesses of the bush member.

14. (New) The balancer driven gear of an engine according to claim 10, wherein some of the inward and dowels are disposed proximate one another without any elastic members therebetween.

DISCUSSION

Upon entry of the present amendment, Claims 1-5 remain in the application, of which, claims 1 and 4 are independent. New claims 6-14 are being added by the present amendment, and of these, claim 10 is independent.

The above-identified Office Action has been reviewed, the references carefully considered, and the Examiner's comments carefully weighed. In view thereof, the present Amendment is submitted. It is contended that by the present amendment, all bases of rejection set forth in the Office Action have been traversed and overcome. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Drawing Issues

Applicant thanks the Examiner for his confirmation that the originally-filed drawings have been accepted and approved for publication.

Amendments Presented

Applicant has amended paragraph 8 of the specification to fix a minor spelling error.

In the Office Action, the Examiner objected to the abstract as exceeding the 150 word maximum allowed under MPEP 608.01(b). Applicant has amended the Abstract herein to remove the reference numbers therefrom, and to reduce the number of words so that the total number is less than 150, as suggested by the Examiner.

Applicant has also amended claim 1 by the present amendment to specify that the dowels of the bush portion are unevenly spaced. Applicant has also amended claim 1 to clarify that elastic members are respectively provided between selected outward dowels on the bush member and selected inward dowels on the gear member, rather than between every pair of outward and inward dowels.

As presently amended, claim 1 is not taught, suggested nor rendered obvious by the art of record, whether considered individually or in any reasonable combination thereof. Applicant therefore requests reconsideration and withdrawal of the rejections of record in light of the present amendment.

35 USC 102 Issues

In item 1 of the above-identified Office Action, the Examiner rejected claims 1-3 under 35 USC 102(b) as anticipated by Takamura et al., JP 04054347.

The Standard for Anticipation

In the case of *Motorola, Inc. v. Interdigital Technology Corp.*, 121 F. 3d 1461 (CAFC 1997), the Court of Appeals for the Federal Circuit stated:

“For a prior art reference to anticipate a claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in the prior art (citation omitted). ‘The (prior art) reference must describe the applicant’s claimed invention sufficiently to have placed a person of ordinary skill in the field of the invention in possession of it’ (citations omitted). Although this disclosure requirement presupposes the knowledge of one skilled in the art of the claimed invention, that presumed knowledge does not grant a license to read into the prior art reference teachings that are not there.”

The above-quoted passage is consistent with many previous cases of the Federal Circuit and with MPEP 2131, which reiterate the rule that **in order to anticipate a claim, a reference must teach every element of the claim.**

Applicant respectfully submits that Takamura does not disclose each and every element of applicant's claimed invention. The most detailed portion of Takamura et al. is Figures 3-4 and 6-7, which disclose various embodiments of a balancer driven gear. Figures 4 and 7 show the inward and outward dowels being of various widths.

As noted above, applicant has amended independent claim 1 by the present amendment. Applicant respectfully suggests that this amendment to the claim overcomes the rejection under 35 USC 102 based on the Takamura reference, and requests reconsideration and withdrawal of such rejection.

Regarding claim 2, the gear portion and bush portion disclosed in Takamura et al. each have three evenly spaced dowels and as such, a recess between adjoining dowels can not be located on opposite sides with respect to the axis of the balancer driven gear. Therefore, Takamura et al. does not disclose recesses, positioned between adjoining dowels, positioned on opposite sides with respect to the axis of the balancer driven gear having mutually different depths. Further, Takamura et al. does not disclose the other dowels having mutually different heights disposed in the opposite recesses of mutually different depths. As such, Takamura et al. does not anticipate applicant's claim 2.

Regarding claim 3, this claim depends from claim 2, and therefore the above discussion regarding claims 1 and 2 applies equally to claim 3.

Applicant therefore requests reconsideration and withdrawal of the rejection of claims claims 1-3 under 35 USC 102(b) as anticipated by Takamura et al.

In Item 2 of the Office Action, the Examiner rejected claim 1 under 35 USC §102(b) as anticipated by Horita et al. (US 6,626,139).

Upon careful review the disclosure of Horita et al., applicant disagrees with, and traverses this ground of rejection. In his rejection, the Examiner references Figure 22 in Horita et al. However, Figure 22 or Horita discloses a balancer driven gear with inward and outward dowels which are symmetric in shape and dimension with respect to an axis of the balancer driven gear. Since Horita et al. does not disclose a balancer driven gear where at least one of the shapes and dimensions of the outward and inward dowels are asymmetric with respect to an axis of the balancer driven gear, the reference does not anticipate the claim.

In addition, applicant respectfully suggests that the changes to claim 1 made by amendment further distinguish the claim from the teaching of Horita.

Applicant therefore requests reconsideration and withdrawal of the rejection of claim 1 under 35 USC 102(b) as anticipated by Horita et al.

In Item 3 of the Office Action, the Examiner rejected claim 1 under 35 USC §102(b) as anticipated by Nakajima et al. (JP 60192145).

Upon careful review of the disclosure in Nakajima et al., applicant respectfully suggests that the Nakajima fails to disclose applicant's claimed structure. The most detailed portion of Nakajima et al. is Figures 5 and 11-13, which disclose various embodiments of a balancer driven gear. As with Takamura et al. and Horita et al., Nakajima et al. discloses a balancer driven gear with a gear and bush portion each with three identical and evenly spaced inward and outward dowels, respectively. The shapes and dimensions of the inward and outward dowels are symmetric with respect to an axis of the balancer driven gear. The limitation in claim 1, that at least one of the shapes and dimensions of the outward and inward dowels are asymmetric with respect to an axis of the balancer gear, is not disclosed by Nakajima et al. and hence the reference does not anticipate the claim.

In addition, applicant respectfully suggests that the changes to claim 1 made by amendment further distinguish the claim from the teaching of Nakajima.

Applicant therefore requests reconsideration and withdrawal of the rejection of claim 1 under 35 USC 102(b) as anticipated by Nakajima et al.

Allowable Subject Matter

On page 4 of the Office Action, the Examiner objected to claims 4 and 5 as dependent upon a rejected base claim, but the Examiner suggested that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.